STUDIES OF POSTLARVAL SHRIMP IN VERMILION BAY, LA.

The University of Southwestern Louisiana has conducted sampling to investigate fluctuations in the seasonal abundance of postlarval shrimp in Vermilion Bay since February 1963. Samples are collected each week with a hand-drawn beam trawl that is towed over a measured distance near the shoreline. Three sampling stations are located within the bay, and two others are near an entrance to the bay. Results obtained thus far indicate that the movements of postlarval brown and white shrimp into Vermilion Bay take place at about the same calendar time as in the Galveston Bay area. Brown shrimp postlarvae predominate in samples taken during the early spring, and postlarval white shrimp are more abundant beginning in June. The relative numbers of postlarvae vary considerably among the five stations, and it is apparent that some sampling locations do not provide a reliable indication of postlarval abundance. We anticipate that a relation can be found between the abundance of postlarvae at one or two stations and the subsequent production of commercial shrimp.

We made a special study to determine the causes of fluctuations in the number of postlarvae caught over a short time interval near the entrance to Vermilion Bay from August 30 to September 3, 1964. We obtained duplicate samples of postlarvae at 2-hr. intervals throughout the 4-day period. The results of this study indicate that the number of postlarvae in a sample is directly related to the tidal stage (fig.23). This knowledge makes it apparent that future collections from this location should be made at the same stage of the tide each week if they are to reflect the abundance of postlarvae.

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(Contract No. 14- 17-0002-100)

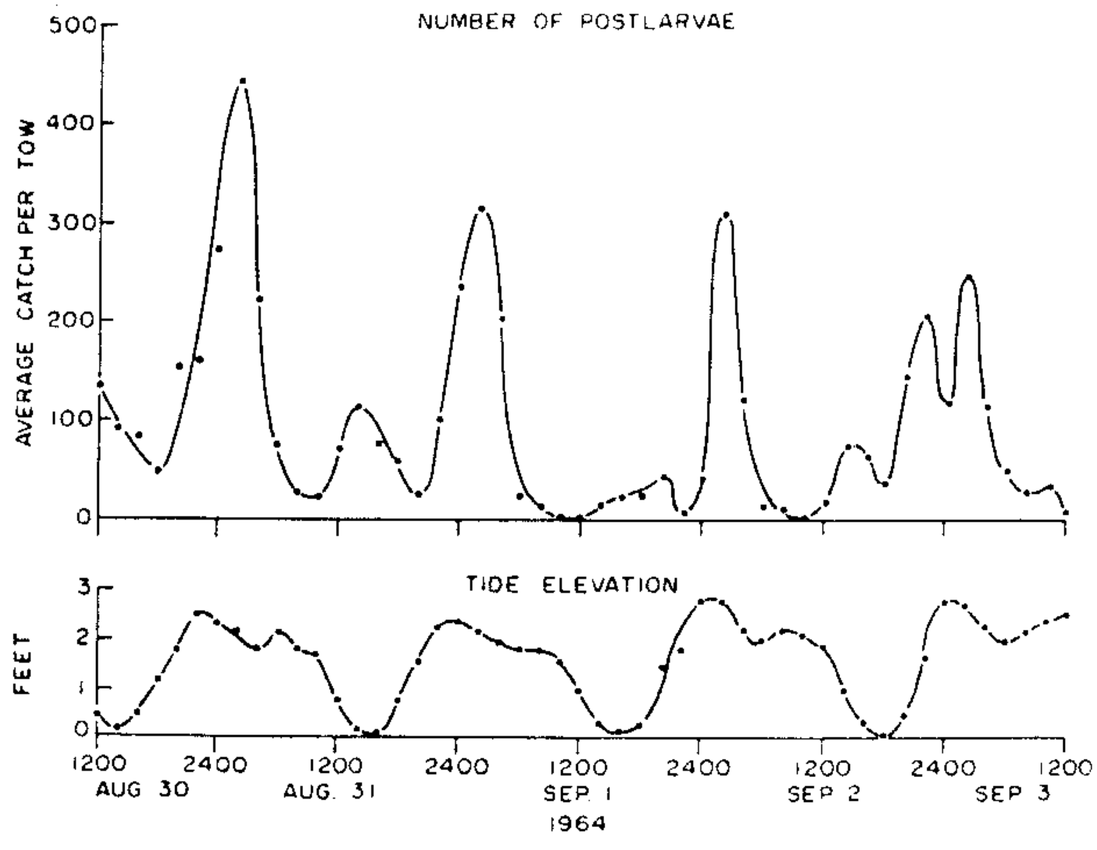

Figure 23.--Fluctuations in the catch of postlarval shrimp and in tide elevation near Marsh Island, La., August-September 1964.